UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

Exercício Obrigatório 2 (Algoritmos Distribuídos)
Caiã de Aragão
Gabriel Osório Alves

Disciplina INF01008 - Programação Distribuída e Paralela
Professor: Claudio Fernando Resin Geyer

Porto Alegre
2016

Global Snapshot Algorithm (Chandy-Lamport)

Pseudocódigo:

```
1  Initiator Process Pi:
2
3  Process records its own state
4  Creates the Marker messages
5  for j=1 to N except i
6      Pi sends out a Marker on outgoing channel Cij;
7  Start recording the incoming messages on each of the incoming channels at Pi (for j=1 to N except i)
8
9  Other process Pi that receives the marker message on an incoming channel Cki:
10
11 if(this is the first Marker Pi is seeing)
12     Pi records its own state first
13     Marks the state of the channel Cki (the one that just received a message) as "empty"
14     for j=1 to N exept i
15         Pi sends out a marker messsage on outgoing Channel Cij
16     Starts recording the incoming messages on each of the incoming channels at Pi:Cij (for j=1 to N except i and k)
17 else // If this is not the first time seing a marker message
18     Mark the state of the channel Cki as all the messages that have arrived on it since recording was turned on for Cki.
```

Initiator Process Pi:

Process records its own state
Creates the Marker messages
for j=1 to N except i
        Pi sends out a Marker on outgoing channel Cij;
Start recording the incoming messages on each of the incoming channels at Pi (for j=1 to N except i)

Other process Pi that receives the marker message on an incoming channel Cki:

if(this is the first Marker Pi is seeing)
        Pi records its own state first
        Marks the state of the channel Cki (the one that just received a message) as "empty"
        for j=1 to N exept i
                Pi sends out a marker messsage on outgoing Channel Cij
        Starts recording the incoming messages on each of the incoming channels at Pi:Cij (for j=1 to N except i and k)
else // If this is not the first time seing a marker message
        Mark the state of the channel Cki as all the messages that have arrived on it since recording was turned on for Cki.